

STRUCTURE 97

This structure is a reinforced concrete, gated spillway with discharge controlled by two cable operated, vertical lift gates. Operation of the gates is automatically controlled so that the gate operating system opens or closes the gates in accordance with the seasonal operational criteria. The structure is located on Canal 23, 3300 feet west of the Sunshine State parkway, and about 2½ miles west of S-48.

PURPOSE

This structure maintains optimum upstream water control stages in Canal 23; it passes the design flood (30% of the Standard Project Flood) without exceeding the upstream flood design stage, and restricts downstream flood stages and channel velocities to non-damaging levels.

OPERATING CRITERIA:

This structure is operated under either high or low ranges depending on basin conditions; control is automatic in each mode but transfer from one mode to the other is manual.

Low Range

When the headwater elevation rises to 22.2 feet, the gates begin to open;

When the headwater elevation rises or falls to elevation 21.0, the gates become stationary;

When the headwater elevation falls to 20.5, the gates begin to close.

High Range

When the headwater elevation rises to 23.2 feet, the gates begin to open;

When the headwater elevation rises or falls to 22.8 feet, the gates become stationary;

When the headwater elevation falls to 22.2 feet, the gates begin to close.

FLOOD DISCHARGE CHARACTERISTICS

	Design*	Standard Project Flood*
Discharge Rate	<u>5035</u> cfs	<u>5035</u> cfs
	<u>30</u> % SPF	<u>100</u> % SPF
Headwater Elevation	<u>18.5</u> feet	<u>25.0</u> feet
Tailwater Elevation	<u>14.0</u> feet	<u>14.0</u> feet

Type Discharge	controlled <u>submerged</u>	controlled <u>submerged</u>
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*Required gate openings exceed allowable limits for both Design & Standard Project Floods.

DESCRIPTION OF STRUCTURE

Type reinforced concrete, gated spillway

Weir Crest

Net Length 44.0 feet

Elevation 7.8 feet

Service Bridge Elevation 27.0 feet

Water Level which will by-pass structure 27.0 feet

Gates

Number 2

Size 14.2 ft. high by 22.8 ft. wide

Type vertical slide gates

Bottom elevation of gates, full open	<u>19.5</u> ft. Normal
	<u>25.0</u> ft. Maximum

Top elevation of gates, full closed	<u>23.0</u> ft.
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Control	<u>On-site automatic and remote computer control</u>
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Lifting Mechanism

Normal power source commercial electricity

Emergency power source LP engine driven generator

Type Hoist direct drive motor, gear connected to cables.

Date of Transfer: December 14, 1965

ACCESS: _____

HYDRAULIC AND HYDROLOGIC MEASUREMENTS

Water Level Remote digital headwater and tailwater recorder

Gate Position Recorder Remote digital recorder on all gates

Other _____

DEWATERING FACILITIES

Storage Okeechobee Field Station

Type Steel needle beams and aluminum needles

Size and Number (per bay)

Upstream

5 Needles 4' x 20'

5 Needles 4' x 22'

1 Needle 2' x 22'

1 Needle 2' x 20'

Beams 24 WF 145, 23'-11" long and 24 WF 100, 23'-11" long

Downstream

2 Needles 3' x 22'

1 Needle 3' x 20'

Beams 24 WF 100, 23'-11" long